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ABSTRACT

A two-part study investigated the speed with which information about the explosion of the space shuttle "Challenger" was disseminated and the information holding and affect differences associated with different media channels. In the first part of the study, cross-sectional data were collected from 119 college undergraduates within 54 hours of the explosion through means of a questionnaire that asked how they had reacted to the explosion, how they had heard about it, and other pertinent information. In addition, the students completed a general knowledge questionnaire one week later about a variety of news topics and about the space program. In the second part of the study, 40 students were asked to monitor the news on only one of three media--radio, television, or newspapers. Findings showed that television-reliant students were more knowledgeable about the disaster than were newspaper- or radio-reliant students. The television-reliant students also possessed more accurate technical information and were more likely to recall accurately the details of the explosion. A model composed of expertise, diffusion variables, motivational factors, and affective reactions accounted for significant amounts of the total variance in facts recalled. Tables and figures are provided. (FL)

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Feeling and Learning about a Critical Event: The Shuttle Explodes

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Feeling and Learning about a Critical Event:
The Shuttle Explodes

ABSTRACT

This study examines feelings, learning and diffusion effects resulting from the Challenger explosion using a two pronged approach both in a cross-section and an over-time panel design. The sample consists of Cleveland State undergraduates.

Several key conclusions have emerged from this investigation:

1) Television-reliant individuals were more knowledgeable about the shuttle disaster than were newspaper-reliant or radio-reliant subjects. Participants who received their news from television possessed the most accurate knowledge about the location of the O-Rings, the size and number of the O-Rings, the temperature at launch time, as well as of the identity of the firm that manufactured the shuttle (Morton Thiokol Co.).

2) Interestingly, television subjects were also significantly more likely to accurately recall the visual details of the shuttle explosion--i.e., the size of the O-Rings and their location on the shuttle.

3) A model, composed of expertise, diffusion variables, motivational factors and affective reactions, accounted for significant amounts of the total variance in facts recalled about the disaster (R2=.26). Affective reactions to the shuttle, entered as a block, added the greatest amount of variance (R2=.14). Of the four affective variables, shame best predicted the number of facts recalled.

4) When affective reactions were treated as dependent variables, the model accounted for 29 percent of the variance in sadness (i.e., how sad did the news today make you feel?). Individuals who heard later about the tragedy were less sad than those who heard earlier; and respondents who learned about the event from the mass media apparently were not as saddened as those who heard the news from interpersonal sources.

5) Interest in the shuttle, also significantly predicted by the motivational block of variables--in particular by knowing individuals who worked at NASA and the perceived personal relevance of the space program (see Perloff, 1985).

6) The steep diffusion curve shows the high salience of this event even in comparison to other salient critical events. And the importance of media in diffusion is again shown to taper off with interpersonal connnections becoming more important later in the process.

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On January 28, 1986 the American mass media interrupted regularly-scheduled broadcasts to provide on-the-spot coverage of the tragic explosion of the Space Shuttle Challenger. Like other critical national events, the broadcast media coverage was immediate, continuous and national in scope. However, the Challenger tragedy differed from other events in these respects: it was an unusually vivid and graphic event (i.e., the fiery explosion, the picture of spectators and relatives watching in apparent disbelief); many members of the viewing public were able to see the explosion when it happened rather than at some later point; and the astronauts themselves evoked strong positive feelings inasmuch as they were associated with a number of very positive national symbols. Some observers compared the event and the public's reaction with the assassination of President Kennedy in 1963.

For these reasons, it seemed interesting and important to devote scholarly attention to the diffusion and impact of media coverage of the shuttle tragedy. Much of the previous literature on critical events, understandably constrained by the exigencies of firehouse research, has not been particularly theoretical or concerned with the processes that might underlie the public's reaction to media coverage of such events (see also Kraus, Davis, Lang and Lang, 1975). In contrast, the present study tested hypotheses derived from the media reliance literature and explored the role of cognition and affect in the diffusion of this news eveheses derived from the media reliance literature and explored the role of cognition and affect in the diffusion of this news eve diffusion and comprehension of critical events. Although such national events have great emotional repercussions, researchers in this area, as well as in diffusion, have

tended to neglect the role played by affect.

Diffusion of News about
Critical Events

Jeffres and Quarles (1983) hold that critical events such as the Kennedy assassination are no longer unique, and Americans may have become so accustomed to crises that news of such events has lost some of its impact (p. 723). Anyone who experienced the public bereavement in the hours following the January 28 space shuttle explosion had reason to suddenly doubt these words.

Chaffee (1975) has shown that the classic S-curve of innovation adoption or information dissemination derives from a classic curve, in the "absence of constraints and with a randomness of interaction (p.90)." More interesting circumstances, he notes, are when some environmental or receiver based factors limit the free and random flow of information. Thus, in the case of a perceived critical event, constraints would be likely to be minimal.

The first part of this study will investigate the speed with which information about the shuttle was disseminated and through which channels it was spread. Any deviation from the classic S curve diffusion pattern will be noted, and systemic constraints will be posited.

However, the investigation will go further than this; factors contributing to an individual's information-gathering activities will be explored, in an effort to explain not only when and how information about the shuttle explosion diffused, but also why some individuals gathered more information than others. This recognition of the role of cognition and affect in the information-dissemination process expands

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the simple descriptive diffusion model to one which is predictive and potentially explanatory.

Information-Holding Effects

The second part of this study will examine information holding and affect differences by media use. Most of the studies comparing those who rely on newspapers and those who rely on television are concerned with political knowledge -- information that arguably needs much more context than one or even a few brief television news reports can give. The shuttle explosion would appear to be an event where people begin relatively even in their levels of knowledge, and thus should be an opportunity to examine information-holding differences resulting from attention to various media.

Patterson and McClure (1976) concluded that television was a much less effective transmitter of information than were newspapers. They claim that television videocentric portrayals of news and events are artificially packaged into segments that do not stimulate audience attention to or retention of the presented information. While they argue that television coverage of many issues such as campaigns and economic concerns has none of the virtues that might make it informative, they do note that certain dramatic events such as an assassination attempt may have powerful effects when presented through the pictures of television. Given that the shuttle explosion was caught completely on videotape and played repeatedly through the first day when little other information was yet available, we would expect that television would have transmitted information at least as effectively as newspapers.

One might venture a bit further. If the information was

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primarily of a visual nature--not the best for newspapers and even worse for radio--then one might expect television to have an some advantage in presentation. Information that required visual perspective might be expected to be best assimilated by television viewers. Further, if the newspaper and radio individuals are best trained to gather information from print and simple audio respectively, then the television individuals might demonstrate further advantage by using television. Salomon (1979) argues:

> That different symbol systems, even when representing the same content, differ with respect to the amount of mental translation from external symbol system to internal mode that they require. Second, I propose that that symbol systems call on qualitatively and quantitatively different mental skills, knowledge acquisition outcomes can be expected to vary respectively.

Later he continues:

> On the basis of these arguments, it becomes possible to speak of ease of extracting information from symbolically coded messages. One symbol system does not communicate better than another. It calls for better-mastered skills than another.

Given the nature of the event here, and the seeming advantages for television, it might be reasonable to expect television to actually do better than newspapers in some levels of knowledge.

METHODOLOGY

Cross-sectional study

Cross-sectional data were collected from a total of 119 individuals enrolled in four different communication courses at Cleveland State University; these data were collected via an initial shuttle questionnaire (asking respondents within 54 hours of the explosion about their immediate reactions, where they heard about the disaster, etc.) and, one week later, a general demographics and news

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knowledge questionnaire. This latter instrument measured knowledge about a variety of news topics with a 26-item open-ended quiz-type index; it also included items tapping involvement with the space program (Do you know anyone who works for NASA? -- The NASA Lewis Research Center is located in the Cleveland area -- Before the Shuttle explosion how interested were you in going into space? and Do you feel news about the shuttle affects you a lot or not at all?) and interest in current events (On a scale of one to seven, where one is Not At All Interested and Seven is very interested, how interested would you say that you are in current events? and On a scale of one to seven, where one is never and seven is always, how often would you say that you discuss current events with . . . your family; your friends; the people you work with?).

Frequencies and cross-tabulations of these data resulted in graphs showing the S-curve of first knowledge about the explosion, and indicating the media through which first knowledge was achieved as broken down by time of first knowledge. Additionally, multiple regression analyses were conducted in the prediction of knowledge, affect, and involvement. These regressions were conducted using a hierarchical, forced-entry model.

The Panel

The data reported here were collected during late January through February in three classes at Cleveland State University. These data were part of a pilot study on the effects of coverage of visceral events such as terrorism, with the investigation expanded with the coincidental occurrence of the shuttle explosion. Students were asked to monitor the news on only one of three

media--newspapers, television or radio. While the generalizability of this data is limited, it is hoped that the relationships observed will help develop future hypotheses. The 40 students were asked to attend to a half-hour news program each weekday for four weeks and fill out a questionnaire immediately after the program. A pretest and post-test were administered to measure levels of knowledge.

Measures

Most students were placed in a media condition based on their report of which medium they used most for current events and political information, a measure often used as an indicator of media reliance (McLeod and McDonald, 1985). Because so few students claimed radio reliance, some students who claimed reliance on television or newspapers but also said they often used radio were assigned to the radio condition. Students in the newspaper condition could read any daily paper available to them, but were charged with reading only national and international news for the first half hour. Most students read the Cleveland daily. Television students could watch any of the evening network news programs they preferred. The majority reported they watched the ABC evening news perhaps because of its earlier broadcast in the local market (ABC at 6:30; CBS and NBC at 7). The radio people were assigned to listen to the first half hour of National Public Radio's All Things Considered. While this might be the New York Times of radio news, it did allow radio people access to a continuous half hour of national/international news that is otherwise largely unavailable.

Expertise was measured on the pretest through a series of political knowledge questions including political actors, local

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politics, other national concerns, international affairs and information about the space program.

Knowledge was measured in several manners. A close-ended post-test with questions about the shuttle disaster and its aftermath allowed discrete content comparisons across media conditions. Students also answered open-ended questions about what they could remember from the day's news. These were coded to give a quantitative measure of facts. Liberal coding allowed the students to define the context of the information. A third type of knowledge was measured to allow some observation of the differences in processing of the day's shuttle news--an open ended question asked the student to describe the day's news to a friend. This question was coded in five ways. Information was coded as to whether it was factual or emotional, whether it was stated in a personal manner (using personal pronouns) or not, and whether it contained associations between facts giving some indication of critical thought about events. To control the emotional/factual and personal/nonpersonal distinctions from confounds due to some individuals simply writing more, percentages were employed by dividing by the total number of facts present. For example, if three statements were measured as personal and emotional, none as personal and factual, two as nonpersonal and factual and none as nonpersonal and emotional, then the score for personal/emotional = .6, personal/factual = 0, nonpersonal/factual = .4 and nonpersonal/emotion = 0.

Feelings were measured on four one-to-seven bipolar scales--Angry/Soothed, Happy/Sad, Proud/Ashamed and Anxious/Calm. Low scores correspond to the first of the pairs (see Abelson, et al, 1982, for a description of the measurement of political feelings).

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RESULTS AND DISCUSSION (PART 1) Information dissemination curve

Figure 1 shows the S-shaped information dissemination curve for the sample of 119. Seventy-nine percent of respondents report having heard about the explosion within the first 30 minutes; 84% within the first 60 minutes; 98% within the first 90 minutes. These figures document an extremely steep dissemination curve. A summary of 14 studies which examined the diffusion of information about five critical events (Quarles, Jeffres, Sanchez-Ilundain & Neuwirth, 1983) identified only two instances in which dissemination occurred more rapidly--the spread of information among Kent State University students about President Franklin D. Roosevelt's death (83% heard within 30 minutes, 94% within 60 minutes, 99% within 90 minutes) and the diffusion of news about President Kennedy's assassination among citizens of Dallas, Texas (84% heard within 30 minutes, 93% within 60 minutes, 95% within 90 minutes). The other five studies examining the Kennedy assassination, as well as studies detailing news diffusion for Dwight Eisenhower's stroke and the attempted assassinations of Ronald Reagan and Pope John Paul, all show slower rates of diffusion, some substantially so.

The Kent State and Dallas studies both documented unusual instances in which extremely rapid diffusion might seem logical-- the Kent State study examined news diffusion among individuals in very close proximity to one another, while the Dallas investigation studied a population with an obvious personal stake (i.e., those living in the city where the assassination took place) as well as one in which the physical distances the news had to travel was at a minimum. Thus, in both cases the constraints upon the system which might impede diffusion were minimal.

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Obviously, the shuttle explosion was a critical event of great proportion. Here, too, there seem to have been few constraints upon the dissemination of information about the explosion within the system under examination. Part of this freedom of information flow may have been a result of close physical proximity (i.e., on-campus student interaction); however, the institution where the study was conducted is a commuter campus, and a majority of the subjects in the cross-sectional study were evening students who were not on campus during the time of the explosion, but instead were at home or at work. Thus, the free information flow which this steep diffusion curve indicates must have also had roots in an environment of high perceived event importance.

This perceived importance may have been generated by a variety of factors, including actual media displays--the agenda setting hypothesis predicts a strong positive relationship between the emphasis of mass media coverage of an issue and the salience of this issue in the minds of audience members (Becker, McCombs & McLeod, 1975). Anecdotal evidence from responses in this study indicate that this may have been operative (e.g., I knew it must be important if they interrupted the TV program, They cut in right in the middle of 'Wheel of Fortune.').

It should also be noted that Figure 1 does show a small proportion of respondents who claim they heard about the explosion prior to the 11:40a.m. (approximate) event. While this does indicate some faulty judgment on the parts of individuals looking back only one or two days, it may also be further indicative of the high perceived importance of the event. In an effort to establish their status as

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early knowers, some respondents may have anticipated the event by more than 20 minutes!

Medium of First Knowledge

Figure 2 breaks down time of first knowledge into four categories: those who found out within the first 10 minutes (pre-11:50, n=30), those who found out within the next 10 minutes (11:50-12:00, n=43), those finding out within the next 40 minutes (12:00-12:40, n=13), and those finding out more than one hour after the event (post-12:40, n=16). For each of these four groupings, media of first knowledge are graphed by percentage of that grouping which found out via each medium. For example, among the earliest knowers, 43% found out via radio, 27% via television, 20% found out in a face-to-face interaction with someone they knew, 7% found out via a telephone call, and 3% found out in a face-to-face interaction with someone with whom they were unacquainted.

We see from the figure the relative importance of mass media channels in diffusing information during the first minutes after the explosion. While television regains some importance for those finding out at a later stage, radio's role consistently decreases over time. Although only one television/cable network showed the explosion live (Cable News Network), apparently nearly all other broadcast and cable networks switched to the story within two or three minutes; thus, any individual engaging in

electronic mass media use at this time could not avoid hearing about the event. (An interesting exception to this trend was PBS--according to respondent reports, children viewing Sesame Street were fortunately not treated to an immediate cut-away to the action in

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Florida.)

While face-to-face interpersonal interaction with a stranger did, as might be expected, play a minor role in diffusion when compared with face-to-face interaction with friends/acquaintances, it is interesting to note that it did play a relatively important role at the middle stages of the diffusion process. Interaction among strangers is increasingly rare in our fast-paced, mobile and media-dominated society, especially in a major metropolitan area. In fact, respondents' open-ended comments lead us to believe that speaking with a stranger about this event, either to tell him/her or to receive the information, was an unusual and sometimes unsettling experience. It seems to go against the norms of communicative behavior, and its occurrence is in need of justification--respondents took great pains to explain that they just happened to be waiting for a bus or riding an elevator, and would of course not normally speak to strangers except for the extreme and unusual circumstances of the event.

Prediction of Cognition and Affect

The information displayed in Table 1 goes beyond the description of how and when people found out about the shuttle explosion--it attempts to explain what happened next for the individual so informed. An attempt was made to statistically predict cognitive indicators of information gained about the explosion and surrounding incidents (FACTS, the number of factual statements generated by the respondent about the event; PERS, the proportion of descriptive statements about the event which were personalized in nature; EMOT, the proportion of descriptive statements about the event which were emotive in nature), affect toward the event in the days

following it (including four types of affect, operationalized as how SOOTHED, SAD, ASHAMED, and CALM they felt about the event), interest in the space program (INTSHT, how interested the respondent was in the shuttle program, and SPACE, how interested the respondent was in going into space prior to the tragedy), and perceived personal relevance of the shuttle incident (AFF, how much the respondent felt news of the shuttle incident affected them).

A multiple hierarchical regression was run for each of these variables, as predicted from all or a subset of these variables entered as listed: level of general news knowledge (KNOW, a summative 26-item index), time of first knowledge measured in minutes (WHEN), medium of first knowledge, where mass media channels=1 and interpersonal channels=0 (MEDHEAR), personal relevance and interest factors (NASA, how many NASA employees the respondent knows; AFF; SPACE; INTMOT, a seven-item index measuring general interest in current affairs and motivation to talk to others about current affairs), and affect (CALM, ASHAM, SAD, SOOTH).

This model significantly predicted three dependent variables--FACTS, SAD, and INTSHT. In addition, personal and emotive statement generation also achieved a moderate level of prediction, but the overall R2 was not significant in either case (PERS=.16, and EMOT=.19). Interestingly, sadness was the only type of affect which seemed to be influenced by diffusion factors and personal relevance/interest factors; shame, calmness, and soothedness are relatively unaffected by these factors.

In the prediction of factual information (FACTS) generated by the respondent about the shuttle incident one or two days

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following the event, affect emerged as most important, even after taking into acccunt general news knowledge, diffusion factors (speed and medium), and personal relevance/interest. The type of affect most closely linked with the generation of factual statements was the feeling of shame--the more ashamed the individual, the less facts he/she generated. This could be indicative of negative affect suppressing information-seeking activity, and/or the affect simply resulting in increased reluctance to communicate about the shameful event.

As noted above, sadness (SAD) was the only affect that was significantly predicted by general news factors, and personal relevance/interest. The latter two sets of factors served as significant predictor blocks (R2=.13 and .14, respectively). Individually, time of first knowledge was the most powerful predictor--the later first knowledge, the less sadness experienced. Medium of first knowledge was also a strong individual predictor--those who heard via mass media channels were less sad than those hearing through interpersonal channels. Two particular types of personal relevance/interest seemed to carry that block's significance: perceived impact of shuttle news on the self and general current events interest/motivation were both significant, positive predictors.

Important to note is the role diffusion factors played in generating affect toward this critical event. These authors know of no body of research which has related information diffusion factors to either cognitions or affect. While these findings do not lead to a definitive conclusion, it does seem that the immediacy of the channel and immediacy in sheer time both contribute to a more negative affect;

delay in time and moderation through an interpersonal source may each mitigate some of the negative affective reactions.

Also significantly predicted via regression analyses was interest in the shuttle program. Here, personal relevance factors served as significant individual predictors and comprised a significant block (R2=.25). The more NASA employees a respondent knows, and the more he/she feels that news about the shuttle affects him/her, the more interested he/she is in the shuttle program. Interestingly, a communication-structural variable serves an important role in predicting interest in a critical event, i.e., social or business connections with the NASA organization seem to have created increased interest in a geographically remote event.

Panel Results

Table 2 presents the percentages of correct answers on the close-ended post-test. Overall, students had a mean knowledge score of 13.7 with a standard deviation of 6.1. This represents one point for each correct response (multiple response questions were given one point per correct response). The newspaper condition had a mean of 12.08; the television a mean of 16.0 and the radio condition a mean of 13.17. Television students showed significantly higher levels of knowledge than newspaper or radio students ($p < .01$). If the shuttle explosion was a fundamentally visual phenomenon, then it is consistent that television condition should know no less than newspaper individuals. Looking at the percentages on Table 2, it becomes evident that all three media groups show similar levels of knowledge about the day of the accident (How many died; and Who they were). Further, they have similar levels of knowledge concerning the previous space accident

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and the astronauts involved (information that appeared in all media). But with regard tc the information that develcped over time (such as the O-Ring phencmenon) the television oriented individual knew more than the newspaper and radic people. Because cf the small samples involved it wculd take a difference of arcund 30 percent to be statistically significant. So any differences cculd be due to random fluctuations alone, but the striking trends and regularities, at the very least, are bases fcr further examination. A visually oriented question might serve as an example. Just better than one in ten radio individuals could estimate the size of an O-Ring, fewer than 2 in ten newspaper readers could dc so, while the television condition individuals could make the estimate more than 4 times in ten.

Figure 3 presents the affect over the four weeks of the study (two data pcints each week). While the sadness attributed to the news decreased cver time as one would expect, the level of shame cycles through the time frame. This could be related tc increasing news of the errors in judgment that emerge over time. Some students commented that mcre and mcre problems are emerging deflating the impression they had had cf the space agency. Figure 4 shows the different types of affect broken down by media. Only three time pcints are represented here (the first, a middle and the last) point). Here we see that the changes across media are quite similar. Radio has some greater changes than either television or newspapers. National Public Radio was often leading the way in critical reporting of the interactions between NASA and the Thiokol engineers. Further, NPR also suggested the possible White House pressure tc launch. This type of reporting may underlie the late increases in Anger and Shame the

figures present for the radio individuals.

CONCLUSIONS

Several key conclusions have emerged from this investigation:

1) Television-reliant individuals were more knowledgeable about the shuttle disaster than were newspaper-reliant or radio-reliant subjects. Participants who received their news from television possessed the most accurate knowledge about the location of the O-Rings, the size and number of the O Rings, the temperature at launch time, as well as of the identity of the firm that manufactured the shuttle (Morton Thiokol Co.).

2) Interestingly, television subjects were also significantly more likely to accurately recall the visual details of the shuttle explosion--i.e., the size of the O-Rings and their location on the shuttle.

3) A model, composed of expertise, diffusion variables, motivational factors and affective reactions, accounted for significant amounts of the total variance in facts recalled about the disaster ($R2=.26$). Affective reactions to the shuttle, entered as a block, added the greatest amount of variance ($R2=.14$). Of the four affective variables, shame best predicted the number of facts recalled.

4) When affective reactions were treated as dependent variables, the model accounted for 29 percent of the variance in sadness (i.e., how sad did the news today make you feel?). Individuals who heard later about the tragedy were less sad than those who heard earlier; and respondents who learned about the event from the mass media apparently were not as saddened as those who heard the news from interpersonal sources.

5) Interest in the shuttle, also significantly predicted by the motivational block of variables--in particular by knowing individuals who worked at NASA and the perceived personal relevance of the space program (see Perloff, 1985).

6) The steep diffusion curve shows the high salience of this event ever in comparison to other highly salient critical events. And the importance of media in diffusion is again shown to taper off with interpersonal connnections becoming more important later in the process.

Perhaps the most provocative finding concerns the knowledge of the shuttle possessed by television-reliant individuals. These findings allow one to cautiously suggest that when an event is highly vivid and graphic--or visual in nature--television is particularly

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suited for imparting information--even non-visual information. But, it may be the visual dimension of the broadcast media that contributes most to learning about such incidents inasmuch as radio subjects performed poorest on all the knowledge indicators. Another explanation for these findings lies in the interaction between the medium and subjects' skills in attending to it. The reader will recall that subjects were assigned to media primarily on the basis of which medium they said they relied on in real life. It is possible, therefore, that individuals who watch television news regularly have developed a particular facility in grasping and remembering salient details from the news.

One might argue that if respondents had been asked more analytical questions concerning the shuttle--such as to discuss the internal disputes at NASA that may have contributed to the tragedy--newspaper readers may have fared better. Indeed, Clarke and Fredin (1978) suggest that newspapers may encourage such analytical reasoning. The present findings are consistent with the hypothesis that, at least when it come to imparting simple visual information, television may be more effective than either radio or newspapers.

The other intriguing set of findings concern the role played by affect in the diffusion of critical events. It was noted at the outset of this paper that the literature on critical events has omitted any examination of affect. The present study suggests that affect makes several contributions. First, it helps to differentiate the reactions of early and late knowers and those who learned about the crisis from interpersonal rather than mass media sources. This has interesting implications for theories of diffusion.

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Affect also best explained respondents' factual recall. Respondents who were most ashamed recalled the fewest facts about the shuttle. Those who felt most ashamed remembered least, suggesting that emotional involvement may inhibit learning. In any event, the role of affect deserves more attention in media research. It would be most interesting to determine whether different media elicit different reactions to critical events. Does television produce more affect--and does this contribute to certain kinds of learning? And how do cognition and affect interact to influence respondents' synthesis of complex emotional events? These questions suggest fruitful avenues for future studies of critical national events, which, we must ruefully conclude, will always be with us.

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TABLE 1

MULTIPLE REGRESSIONS PREDICTING
COGNITIONS, AFFECT, AND PERSONAL RELEVANCE

(NOTE: Figures within double bars are incremental R^2 for variables above that point; all other figures are standardized regression coefficients (betas).)

PREDICTOR VARIABLES	FACTS	PERS	EMOT	SOOTH	SAD	ASHAM	CALM	INTSHT	SPACE	AFF
KNOW	-.12	-.04	.20	-.11	-.14	-.11	-.09	-.06	.01	.02
R^2	.01	.00	.02	.01	.02	.01	.01	.00	.00	.00
WHEN	-.15	-.12	-.02	.22	-.32[c]	.01	-.18	.01	-.09	-.02
MEDHEAR	-.18	.19	-.14	.05	-.16	.02	.12	.03	-.03	.01
R^2	.06	.07[a]	.04	.05	.13[c]	.00	.04	.01	.01	.00
NASA	.04	.06	-.23	.03	.09	.13	.01	.32[c]	-.03	.08
AFF	.06	.04	.01	-.08	.29[c]	-.06	-.26[b]	.36[c]	-.02	.01
SPACE	-.15	-.12	.13	.04	.04	.07	.08	.25[c]	.00	
INTMOT	.07	-.17	.24	-.03	.14[b]	.02	.07			
R^2	.05	.04	.09	.01	.14[b]	.03	.06			
CALM	.04	-.07	.08							
ASHAM	-.39[c]	.17	.18							
SAD	.01	.18	-.07							
SOOTH	.03	.03	.04							
R^2	.14[b]	.05	.04							
TOTAL R^2	.26[b]	.16	.19	.07	.29[c]	.04	.11	.26[c]	.01	.01

DEPENDENT VARIABLES

a - p<.10
b - p<.05
c - p<.01
N=119

Table 2
Percentages of Correct Knowledge

Question	Total	Newspapers	Television	Radio
How Many Died	97.1	100	100	88.9
Names of the Dead	38.2	38.5	33.3	44.4
Previous U.S. Dead	54.5	50.0	58.3	55.6
Names of Previous	27.3	8.3	16.7	44.4
How Many Shuttles	35.0	25.0	54.5	25.0
Shuttle Names	57.6	50.0	75.0	44.4
Time of Explosion	56.3	66.7	41.7	62.5
Where are O-Rings	81.8	83.3	91.7	66.7
How Many O-Rings	36.4	33.3	41.7	33.3
Size of O-Rings	24.2	16.7	41.7	11.1
Parts of Launch Vehicle	81.8	75.0	100	66.7
How Long to Build Shuttle	30.3	30.8	45.5	11.1
Why O-Rings Failed	81.1	75.0	91.7	77.8
Temperature at Launch	68.8	53.8	81.8	75.0
Coldest Previous Launch Temp.	36.4	30.8	54.5	22.2
What's Thiokol	63.6	53.8	90.9	44.4
N=	35	12	12	11

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FIGURE 1

SHUTTLE EXPLOSION
DIFFUSION OF INFORMATION CURVE
(n=119)

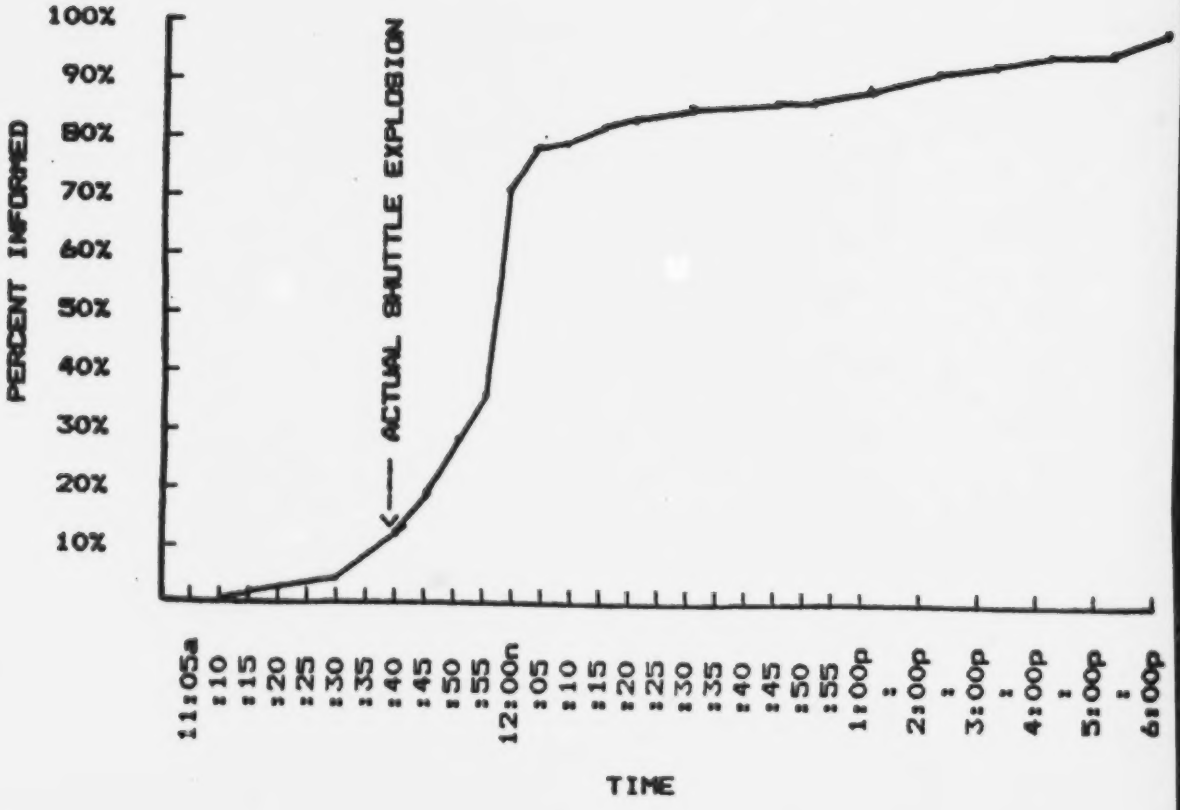
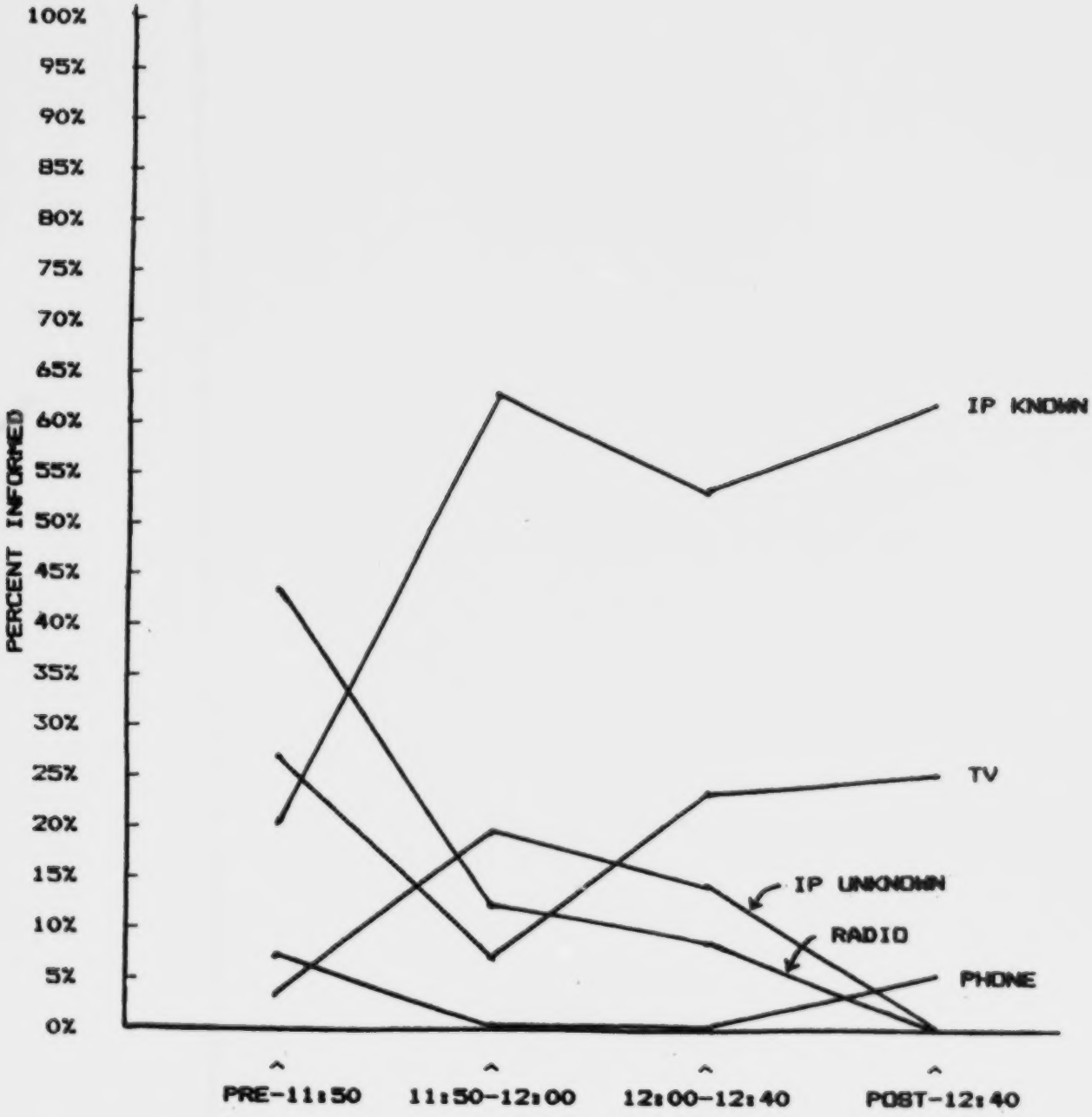
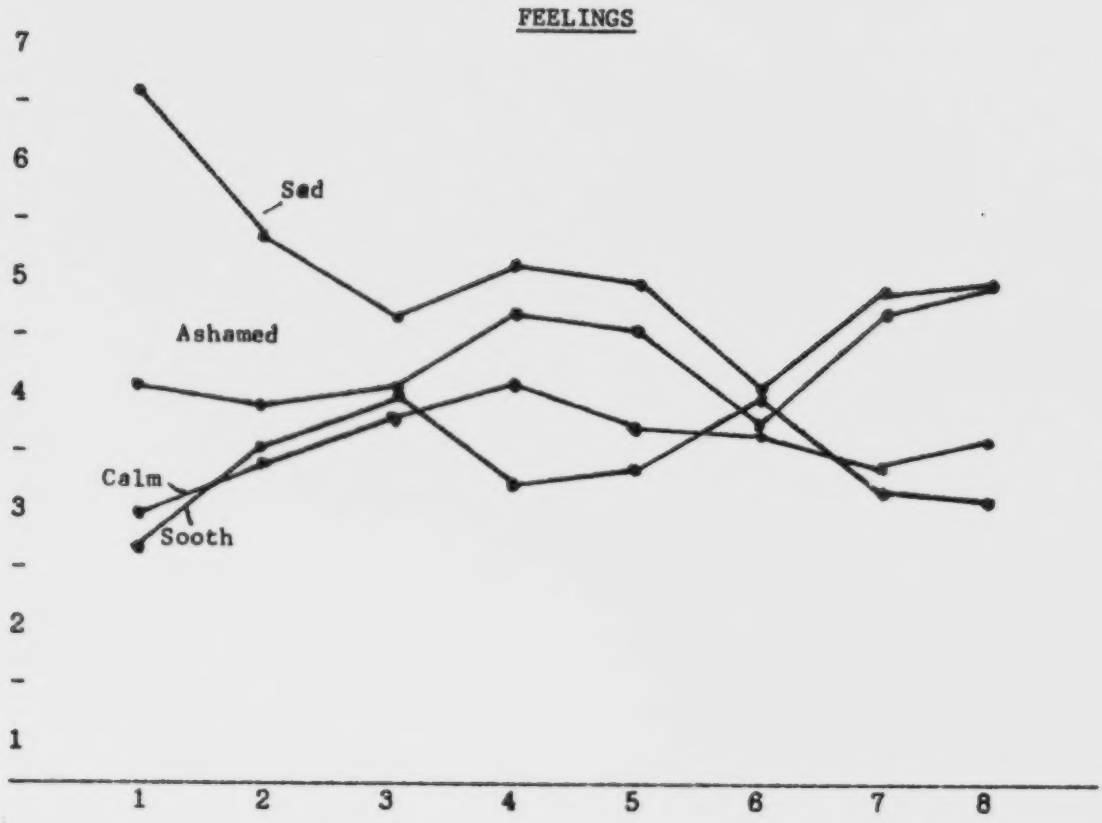


FIGURE 2
SHUTTLE EXPLOSION:
MEDIUM OF FIRST KNOWLEDGE



N=
Time 1 = 30
Time 2 = 43
Time 3 = 13
Time 4 = 16

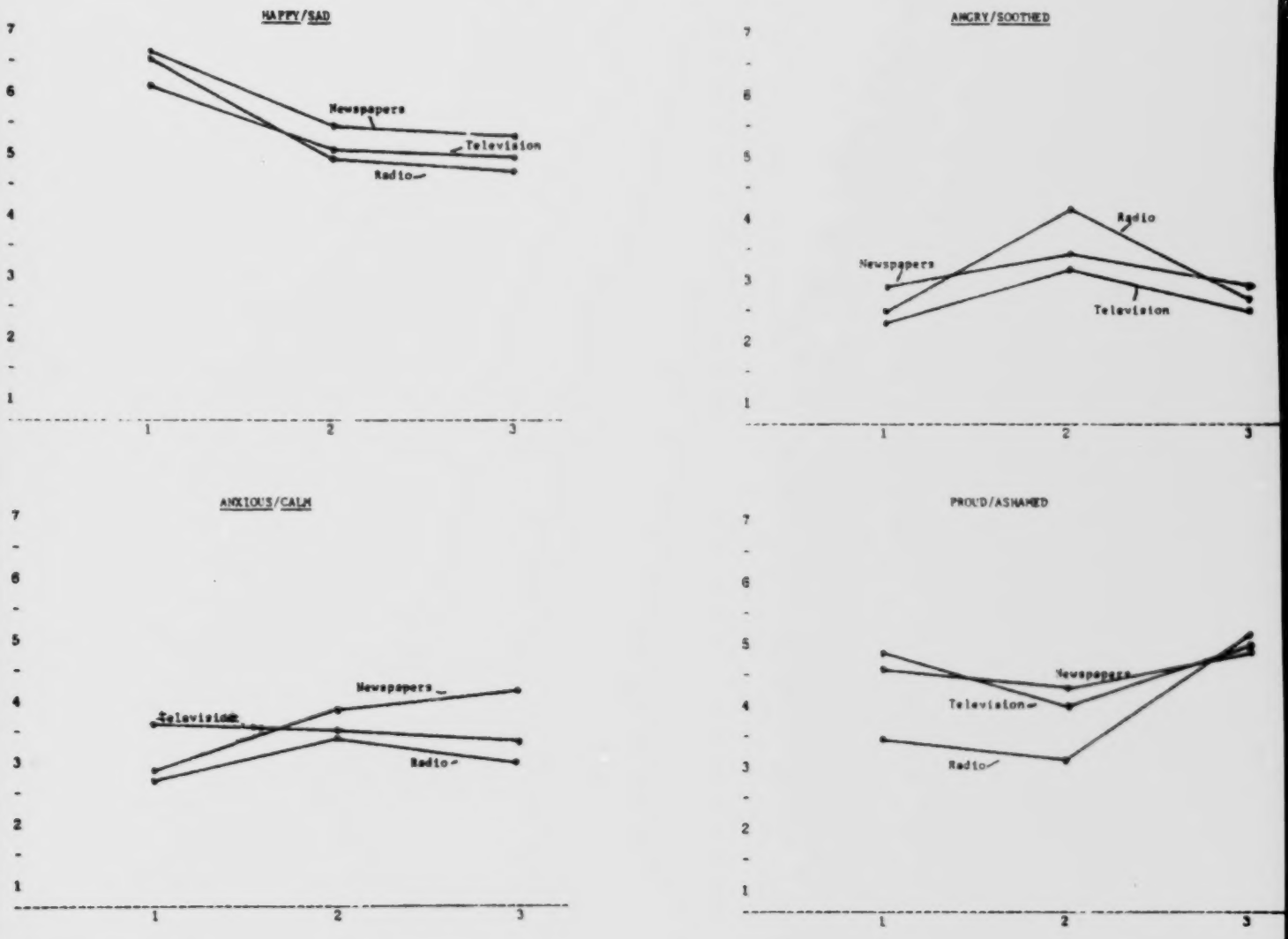
Figure 3



Time: Axis 1-8 represents four weeks

Figure 4

The Horizonal Axes Represent Time and
The Vertical Axes Represent Strength of Feelings



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